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Macronutrient intake in Collegiate powerlifters participating in off season training

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Background

Currently, the ISSN recommends 50-80 kcal/kg/day for strength athletes participating in intense training. In addition to caloric recommendations, other macronutrient recommendations include protein, carbohydrate and fat, 1.5-2.0 g/kg bodyweight, 5-8 g/kg bodyweight, and 30% of total calories respectively. Athletes participating in collegiate club sports may not have the benefit of obtaining nutrition information from a designated coach or nutritionist; therefore, the purpose of this study was to determine the macronutrient intake of collegiate club sport powerlifters participating in intense off season training.

Methods

Six men (22±4 yrs, 177±7 cm, 91±16kgs, 15± 4% bf) and three women (25± 4 yrs, 159± 9 cm, 74± 17 kgs, 31± 12% bf), all members of the Texas A & M University Powerlifting Team, completed 3 day diet records while participating in team training designed to elicit hypertrophy 4 days/week for 9 weeks. Diets were analyzed for macronutrient content using Nutribase software by a registered dietitian.

Results

Powerlifters participating in off season training failed to meet the current ISSN recommendations for calories (25± 8 kcal/kg), protein (1.18± .36 g/kg) or carbohydrate (3.06± .91 g/kg), but obtained the recommended percentage fat intake (32± .3% kcal). When using lean body mass instead of body weight, powerlifters still failed to meet caloric and carbohydrate recommendations, 34.0± 7.0 kcal/kg and 4± 1 g/k respectively. Protein requirements were met (1.6± .3 g/kg) as well as percentage fat intake when lean body mass was used instead of total body weight.

Conclusion

Powerlifters participating in off season training should strive to increase caloric intake in an effort to better meet current ISSN guidelines for macronutrient intake in an effort to optimize training goals through nutrition.

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